Great Salt Lake Water Quality Steering Committee Conference Call Summary

March 23, 2007, 8:30 a.m. – 1:30 p.m.
Department of Environmental Quality, Room 101, 168 North 1950 West, Salt Lake City, Utah.

Attendance

Steering Committee Members and Alternates in Attendance:
Dave Grierson
Nathan Darnall
Dave Naftz
Don Leneord
Kelly Payne
Richard Bay
Leland Myers
Maunsel Pearce
Richard West
DeLane McGarvey
Dianne Nielson
Walt Baker

Science Panel Members:
Bill Moellmer
Theron Miller
William Wuerthele
Anne Fairbrother
Joseph Skorupa
Theresa Presser
Brad Marden
William J. Adams

Others Present:
Ying-Ying Macauley
Jeff DenBleyker
Harry Ohlendorf
Jeff DenBleyker
Monique Rodriquez
Faye Bell
Priya Ganguli
Mark Atencio
Renette Anderson
Florence Reynolds
Doug Bacon
Chris Montague
Wayne Martinson
Jim Olson
Joy Emory

Call to Order
The meeting was called to order by Walt Baker who then had members of the Science Panel and Steering committee and others in attendance introduce themselves.

Approval of the December meeting and the February conference call summaries
There were no changes to the summaries provided. They will stand as the official record of the meeting.

Financial Status Report
The March 15, 2007 disbursement journal shows that $542,942.16 has been spent to date on selenium studies. A total of $216,810.88 remains in uncommitted fund. In addition to the funds shown on the receipts journal, Division of Water Quality may be petitioning for additional funds from forestry and state lands.

Amendment No. 1 to Task Order No. 4
The purpose of this amendment is to provide additional sampling and laboratory services to measure selenium removal from the Great Salt Lake via volatilization. The Science Panel is in agreement of this recommendation. The Steering Committee approved the amendment unanimously and allocated $44,475 towards the project.

2007 Contracts Update

As a result of the Science Panel meetings on March 21 and 22, the following projects were recommended to the Steering Committee. (Additional detail was outlined in the PowerPoint presentations, available on the website):

1. Spring Synoptic Survey - $45,000
2. Gull Survey - $35,000
3. Shorebird Survey – $30,000
4. Additional Sediment Core Studies - $30,000
5. CH2M Hill Oversight and Modeling - $80,000
   (The company's current contract expires in September and does not cover the additional work.)
6. Additional Lab Analyses - $40,000

Total: $260,000

The Gull Survey is a proposal to collect samples from three colonies: two on the Great Salt Lake and a third from a fresh water source – perhaps from either the Bear River Refuge or from Farmington Bay. A suggestion was made to collect the third sample from Mono Lake which is similar to the Great Salt Lake in its salinity but does not have high selenium levels. A request was made for an estimate of what it would cost to add Mono Lake to the study. A question was raised about mercury concentration and its interaction with selenium. Theresa Presser pointed out that not having a mercury piece to the study would be difficult.

The purpose of the additional sediment cores studies is to focus on sequestration and where it is occurring.

The purpose of knowing the relationship between blood, diet, and egg Se concentrations (i.e., gull and shorebird studies) is to determine whether the existing blood data are anomalous as concentrations are higher than expected given concentrations in diet and eggs.

The need for prioritization was pointed out. Currently, there is a $43,000 gap between available funds and additional projects to be funded. While there is the possibility of making available funding through the Water Quality TMDL work, Walt Baker noted the need to go back and make sure something else would not be shortchanged. Bill Moellmer suggested that CH2MHill be asked to get a better handle on the actual costs of the projects; the current numbers were "guesstimates." With that information, priorities could be set.

It was pointed out that if CH2M Hill had the money to get through the summer, as had been suggested, the other projects could be done. The Steering Committee agreed to approve the five projects (#1-4 and #6) up to the levels identified, in aggregate (not to exceed $180,000). If there is an increase in the total amount required after the numbers have been refined, the Science Panel was instructed to come back to the Steering committee for approval.

CH2M Hill was instructed to scope out the amounts and to begin the process of executing the additional contracts.

Threshold Values: Selections by the Science Panel

The Steering Committee's attention was drawn to the memo (included on the website). The Science Panel will recommend a range of values. The final decision on thresholds is a policy decision for the Steering Committee. To be decided was whether the Committee would recommend a "no effects" standard (i.e., most protective) or a standard of higher EC value (i.e., less protective).

Bill Wuerthele stated that EPA is likely to accept some level of effect but would be unlikely to approve anything less protective than a 90% protection level, i.e., EC10. The agency has no national guidance on what the level of protection should be, but in making its determination, will be looking at:

- Aquatic Life Guideline (1985) which calls for a 95% protection level.
- Great Lakes Initiative which calls for no observable effect. (Wuerthele suggested that, to understand the requirements, the words "statistically significant" should be inserted.)

EPA will also be required to consult with U.S. Fish and Wildlife to ensure that the Endangered Species Act requirements are met. The primary species of concern will be the Bald Eagle. There may be others.

Nathan Darnall explained that in circumstances where there is no specific information on the listed species (e.g., no data on selenium in GSL bald eagle eggs), his agency could evaluate the prey base (e.g., fish and ducks) to determine potential effects to the listed species. Other laws along this line which may come into play are the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Bill Adams noted the Science Panel had not focused its attention on bald eagles and hadn't looked at their diet on the Great Salt Lake and suggested the Panel might need duck whole body measurements.

Wuerthele was asked whether he felt EPA had the information it needed to make a biological evaluation and whether or not it was reasonable to set a goal of adopting a standard within the next few months, based on what is known. He replied that yes, there was a strong argument for moving forward with the information that would be available to the group by October.

Deep Brine Sample Issues

Bill Moellmer explained that the spike samples of the GSL surface water showed good recovery, while the spike samples of the GSL deep brine samples showed relatively low recovery. Theron indicated the possibility of volatilization due to pressure reduction during the analytical process in the laboratory. The Frontier Laboratories is looking into the cause of low recovery in the matrix spikes of the deep brine samples.

Data Integration to Simplified Conceptual Model

Harry Ohlendorf used a poster to explain the simplified conceptual model. The data in Excel spreadsheet format will be integrated into this model over the next several months.

Data Released for Publication

It was agreed that once the Science Panel has reached a consensus that a report is complete and that determination has been confirmed by the Steering Committee, the data can be released for publication. Since the data would, at that point, be in the public domain, the PI has full intellectual freedom. The Committees agreed that common courtesy would dictate that a "heads up" be provided to the Science Panel and the Steering Committee.

Process Review and Future Improvements

The "Purpose and Objectives of the Steering Committee" was reviewed. It was recommended that Item 4d be expanded so that it now reads (changes in italics) Sponsoring data collection *and maintaining scientific data and reports in a way that facilitates its use.*

The "Organization Chart for Water Quality Studies (8/24/2004)" was reviewed. It was noted that there was not a Science Panel for the Farmington Bay studies.

The "Process Chart for the GSL Water Quality Work Group (revised July 26, 2006)" was reviewed. It was noted that the group was well beyond the timeline originally envisioned. The 2006 dates at the end of the chart should be 2007 and the August date for the Science Panel to provide a report to the Steering Committee should be moved back to the end of November 2007.

Walt Baker outlined the process for the Steering Committee to take its recommendation back to the Water Quality Board and the steps the Water Quality Board then needed to undertake. The group seemed to agree there was merit in considering an outside stakeholder process, including providing a one page summary of each of the key findings by the Science Panel. Also discussed was the possibility of a symposium to present the information.

Jordan Valley Water Conservancy District's timeframe for its Southwest Jordan Valley Project was discussed. Jordan Valley WCD has deadlines in its agreement addressing the completion of the two reverse osmosis plants. The first plant, the Bingham Canyon Plant, is finished and online. The second plant is scheduled to be completed in early 2010. Richard Bay told the group that, while the timeline would be tight, his agency would work with the deadline. It is likely that, by September, there would be a feel for what the Science Panel's recommendation will likely be. Jordan Valley WCD agreed to include mercury measurement in the suite of groundwater tests.

The key dates for the water quality process were identified as follows:

- November 28 and 29 – The Science Panel would meet to determine its recommendation for a selenium standard.
- November 30 – A joint meeting with the Science Panel and the Steering Committee where the Science Panel informally presents the conclusions it has reached. A goal for this meeting would be to identify any gaps before the information is formally presented to the Steering Committee.
- December 11 – The Steering Committee will meet with the public and deliberate the Science Panel's recommendation. This meeting would also be an opportunity for external stakeholders to be informed and educated.
- January 18 – The Steering Committee's recommendation would be presented to the Water Quality Board and the item could then be sent out for public comment.
- April 18 − The Water Quality Board adopts the standard and rule.

Legislative Update

The 2007 Legislature approved $66,500 in restricted funds for additional mercury testing on the Great Salt Lake. A request for $147,000 in ongoing money to help identify and address the sources of mercury in the State did not make the final priority list. However, Dianne Nielson expressed hope that the Department may get the money in a future session.

Mercury is a regional priority for EPA Regions 8, 9 and 10. DEQ will be following up with EPA headquarters to encourage continuing support of the mercury issue, particularly as it relates to air transport.

Finally, the Legislature recently approved the creation of a Utah Lake Commission. Water Quality will be watching this Commission closely to see how things proceed. Ideally, a similar commission should be established to deal statutorily with all issues relating to the Great Salt Lake.

Farmington Bay Wetlands Study

A copy of the PowerPoint presentation by Theron Miller, the memo on Results and Additional Data Needs, and the current disbursement journal for this project are available on the website. An additional

$90,724.41 is needed to complete the identified Farmington Bay studies. Committee members were asked to consider which projects it wanted to do now and what work could be delayed. Theron Miller pointed out that the nesting season peaks in mid-May. The study's objective is to develop site specific standards for wetlands so that it could be said, with some degree of confidence, that State is protective.

The question was raised about the way land management and water quality issues could fit together. Mr. Baker explained that, if the waters were impaired, his division would perform a TMDL.

Focusing on the funding issue, it was pointed out that the Forestry, Fire, and State Lands funds for FY 2008 ($100,000) would become available on July 1, 2007. Those funds would be used on the Great Salt Lake studies. Mr. Baker also pointed out that Legislature recently gave the Water Quality Board authority to authorize non-point source grant funds for studies. This funding source may become available in May. After hearing Mr. Baker express confidence that other funding sources would be available for the remaining Great Salt Lake projects (mentioned earlier in the meeting), the Steering Committee directed that the Farmington Bay studies need be funded ($90,742.41), conditioned on the Technical Advisory Committee scoping the work out.

Other Issues

Ying-Ying Macauley reported that EPA had offered $105,000 for Utah to use to develop nutrient criteria, including developing a consolidated nutrient database for fresh waters for about $35,000.

Next Meeting

The next Science Panel Meeting will be on July 31 and August 1. Conference calls will occur on April 27 and May 22. (Update: A recent e-mail among Science Panel members indicated the following new schedule: June 12, 1:00pm - conference call; June 19, 1:00pm - conference call; July 31, 1:00pm - conference call; August 21/22 - meeting in Salt Lake City; November 28/29 - meeting in SLC)

The next meeting of the Steering Committee will be held on Tuesday, June 5 at 3 p.m.

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